# Knowledge levels and attitudes of Muslim religious officials regarding organ transplantation

Niveles de conocimiento y actitudes de los funcionarios religiosos musulmanes con respecto al trasplante de órganos

Özlem Soyer Er<sup>1</sup>, Pakize Özyürek<sup>1</sup>

### **RESUMEN**

Introducción: El liderazgo y las actitudes de los funcionarios religiosos en el trasplante de órganos pueden ser una herramienta de comunicación eficaz para cambiar la actitud del público hacia la donación de órganos. Objetivo: Determinar el nivel de conocimiento y las actitudes de los funcionarios religiosos musulmanes que trabajan en un centro de la ciudad con respecto al trasplante de órganos. Materiales y Métodos: Esta investigación descriptiva se llevó a cabo para determinar el nivel de conocimientos y actitudes de 127 funcionarios religiosos musulmanes que trabajan en una provincia de Turquía con respecto a la donación y trasplante de órganos. Resultados: La media de edad de los funcionarios religiosos participantes de investigación fue de 42,2±8,8 años, siendo el 85,0% del sexo masculino. Un total de 92,9% de los funcionarios religiosos no donaron órganos y 89,0% afirmó que recomendaría la donación de órganos. Un total de 74,0% respondió "sí" a la pregunta "¿Le gustaría recibir un trasplante de órganos si lo necesitara?" Se utilizó la Escala de Conocimiento sobre Donación y Trasplante de Tejidos de Órganos (ODTKS). La puntuación ODTKS media fue de 11,07±3,78. La puntuación media de la subdimensión de las características del donante de la escala fue de 3,37±1,11, y la puntuación media de la subdimensión de los procesos legales, éticos y médicos relacionados con la donación y el trasplante de órganos fue de 7,69±3,01. Hubo diferencia entre los grupos según el nivel educativo (p=.042), considerar donar sus órganos (p=.043) y someterse a un trasplante de órganos en caso de necesidad (p=.027). **Conclusión:** Se observó que el conocimiento de los participantes se encontraba en un nivel medio y el nivel de conocimiento aumentaba a medida que aumentaba el nivel educativo.

**PALABRAS CLAVE:** Donación de Órganos; trasplante de órgano; funcionarios religiosos; Turquía

## **ABSTRACT**

Introduction: The leadership and attitudes of religious officials organ transplantation can be effective communication tool in changing the public's attitude towards organ donation. Objective: To determine the knowledge level and attitudes of Muslim religious officials working in a city center regarding organ transplantation. Methods: and Materials This descriptive research was carried out to determine the knowledge and attitudes of 127 Muslim religious officials working in a province of Turkey regarding organ donation and transplantation. Results: The

Correspondencia: Özlem Soyer Er ORCID: 0000-0002-9272-2400 ozlemm\_soyer@hotmail.

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1) Afyonkarahisar Health Sciences University, Surgical Nursing Department, Afyonkarahisar, Turkey

mean age of the religious officials participating in the research was 42.2±8.8 years, and 85.0% were male. 92.9% of religious officials did not donate organs, and 89.0% said they would recommend organ donation. 74.0% answered «yes» to the question «Would you like an organ transplant if you needed it?» Organ-Tissue Donation and Transplantation Knowledge Scale (ODTKS) were used. The mean ODTKS score was 11.07±3.78. The scales donor characteristics sub-dimension mean score was 3.37±1.11, and the sub-dimension score average of legal, ethical, and medical process related to organ donation and transplantation was 7.69±3.01. There was a difference between the groups according to educational status (p=.042), donating their organs(p=.043), considering and having an organ transplant in case of need (p=.027). **Conclusion:** The participants knowledge was at a medium level, and the level of knowledge increased as the educational status increased.

**KEYWORDS**: Organ donation; Organ transplantation; Religious Officials; Turkey

# **INTRODUCTION**

Organ donation is the bequest of some or all of one's organs while alive to be used in treating other patients after one's death (1). In 2021, 3375 kidneys, 2812 cornea, 1528 liver, 24 heart, and 21 lung transplants were performed in Turkey. Of these transplants, 3022 kidney and 1387 liver transplants were from living donors and 1250 from cadavers. The number of patients waiting for organ and tissue transplantation for 2020 was 25943 (2). While cadaver donors in developed countries provide most organ needs, one of the main problem issues in developing countries, including Turkey, is the need for more cadaveric organs for transplantation (3). Lack of knowledge about religion causes insufficient organ donation from existing cadavers (4). Those curious about the religious aspect of organ donation in Turkey usually consult religious officials working in mosques and offering Quran courses (5). The Religious Affairs High Council of the Presidency of Religious Affairs in Turkey defined organ donation as "the greatest help that a person can give to another person". It stated that there was no religious objection to organ transplantation with

its decision dated 06.03.1980 and numbered 396 (6). The leadership of the religious officials who will evaluate organ transplantation according to different religious groups or beliefs and the attitudes of the religious officials can be an effective communication tool in changing the society's attitudes towards organ donation (4,7). Individuals often consult religious leaders for advice on organ donation. In one study, more than half of the participants reported that, as family members, they consulted religious leaders about organ donation (8). When evaluating attitudes towards organ donation, negativity is often related to religious information misconceptions. From this point of view, the support of religious officials gains importance (9). This shows that consulting a religious leader on organ donation is an essential source of information for the community and provides an opportunity to improve current organ donation rates (10). In this sense, after the religious education offered by religious officials to a Muslim group on organ donation, the idea of being a donor increased from 50% to 75%. Thus, it has been shown that reflecting knowledge can improve organ donation rates (11). In this respect, it is vital that religious officials, who are leaders and consultants in society, have correct and sufficient knowledge about organ donation and transplantation. Thus, religious officials will provide correct guidance on organ donation and transplantation, increasing organ donation, preventing progressive complications in patients, increasing their quality of life, and reintegrating them into society.

### **OBJECTIVES**

It was aimed to determine the knowledge level and attitudes of Muslim religious officials working in a city center regarding organ transplantation.

# MATERIALS AND METHODS Study Design and Participants

It was an online descriptive study planned to determine the level of knowledge and attitudes of religious officials working in a city center in Turkey regarding organ transplantation. The universe of the study consists of 400 religious officials. The study sample included 127 people over 18 who voluntarily participated and could use the Internet, determining the research participation rate of 31.7%.

### **Data Collection**

This study was conducted online between April 1 and July 1, 2021. The WhatsApp group of religious officials shared the questionnaire form through the Provincial Mufti. The electronic data collection form created through the "Surveey.com" online survey system was used as a data collection tool in the research (http://www.surveey.com/SurveyStart.aspx?lang=1&surv=e96ee414171843d 096795ca4cf34ebed).

# Measurements Sociodemographic Form

It consisted of 9 questions: age, gender, educational status, place of residence, and occupation.

Organ-Tissue Donation and Transplant Attitude Questionnaire

Researchers, in line with the literature, prepared it. The state of the participants to donate their organs and their recommendation for organ donation were answered as "yes" and "no". The state of considering organ donation and the desire to have an organ transplant in case of need were answered as "yes," "no," and "partially".

# Organ-Tissue Donation and Transplant Knowledge Scale

This scale was developed by Emiral et al. in 2017. There are 17 questions to measure the knowledge level of the participants about organ-tissue donation and transplantation. There are 2 sub-dimensions in the scale: "Donor Characteristics," consisting of 5 items, and "Legal, Ethics, Medical Process Related to Organ Donation and Transplantation," consisting of 12 items. Each question is answered as "true," "false," and "I do not know". Each correct answer is 1 point, and eight questions (items 2,6,8,9,10,13,15,17) are reverse scored. The lowest score that can be obtained from the scale is 0, and the highest score is 17, and as the score increases, the level of knowledge about the subject increases. The Cronbach's alpha value of the scale was found to be 0.880 [12]. The Cronbach's alpha value for this study was found to be 0.815.

## **Data Analysis**

SPSS (Statistical Package for the Social Sciences) for Windows 21.0 (IBM SPSS Statistics for Windows, Version 21.0. Armonk, NY: IBM Corp.) was used to analyze the data obtained from the

research. The sociodemographic and occupational characteristics of the participants were described with frequency, percentage distribution, mean, and standard deviation values. Data's' two-sample t-test, one-way analysis of variance, Kruskal Wallis, and Mann Whitney U test were employed. P values less than 0.05 were considered statistically significant in all results (p<0.05).

#### **Ethics**

Detailed information regarding the study was included in the data collection form for the participants. The study permit was assumed as given in case the participants filled out the form. Written permission was obtained from the non-interventional ethics committee of a university (dated .05.03.2021 and numbered 2021/172) and the Provincial Mufti (dated 17.02.2021 and numbered E-83191748-249-1065875) for the research.

### **RESULTS**

The mean age of the religious officials participating in the research was 42.2±8.8 years, and 85.0% were male. 85.8% of the religious officials had a bachelor's degree, 97.6% were married, 70.9% lived in the province, and 70.0% worked as imams. No statistically significant difference between the organ-tissue donation and transplantation knowledge scale means scores between the groups according to age, gender, marital status, place of residence, duty, organ donation status, and recommendation for organ donation (p<0.05). There was a statistically significant difference between the mean scores of organ-tissue donation and transplantation knowledge scale between the groups according to the education level, the state of considering donating their organs, and having an organ transplant in case of need (p>0.05) (**Table 1**).

**Table 1.** Analysis results of participants' sociodemographic characteristics and attitudes towards organ donation according to their Organ-Tissue Donation and Transplantation Knowledge total scores

Variables	Organ-Tissue Donation and Transplantation Knowledge Scale				
Age (years) (Mean±SD=42.2±8.8)	n (%)	Mean ± SD	Test and p		
≤ 40	57 (44.9)	11.1±3.3	t=0.327		
> 40	70 (55.1)	10.9±4.0	p=0.744		
Gender					
Female	19 (14.2)	11.9±3.2	t=1.096		
Male	108 (85.8)	10.9±3.8	p=0.275		
Education Level					
High School	15 (11.8)	10.0±3.7	KW=6.352		
University	109 (85.8)	11.1±3.7	p= 0.042		
Master/PhD	3 (2.4)	14.6±1.5			
Marital Status					
Married	124 (97.6)	11.0±0.3	t=0.275		
Single	3 (2.4)	11.6±0.6	p=0.784		
Residence					
Province	90 (70.9)	10.7±3.9	F=0.908		
District	8 (6.1)	11.3±1.9	p=0.406		
Village	29 (22.8)	11.8±3.7			
Position					
Imam	85 (70.0)	11.0±0.4	KW=3.187		
Quran Course Teacher	20 (15.7)	11.7±0.6	p= 0.364		
Preacher	3 (2.4)	13.6±0.6			
Other*	19 (14.9)	10.0±0.9			
Organ Donation Status					
Yes	9 (7.1)	11.4±0.8	t=0.275		
No	118 (92,9)	11.0±0.3	p=0.784		
Status of Considering Donating Their			1		
Yes	47 (37.0)	12.2±2.9	KW=6.300		
No	19 (15.0)	10.7±4.2	p= 0.043		
I am uncertain	61 (48.0)	10.2±4.0	•		
Status of Recommending Organ Dona	, , ,				
Yes	113 (89.0)	11.3±3.4	Z=1.313		
No	14 (11.0)	9.0±5.6	p=0.189		
Status of Organ transplant in case of n	, , ,		1		
Yes	94 (74,0)	11.6±3.2	KW=7.227		
No	6 (4.7)	10.6±5.8	p= 0.027		
I am uncertain	27 (21.3)	9.1±4.3			

<sup>\*</sup> Muezzin Trustee, Chief Imam Hatip, Branch Manager

The Organ-Tissue Donation and Transplantation Knowledge Scale mean score of Muslim religious officials participating in the research was 11.07±3.78. The scale's donor characteristics sub-dimension mean score was

3.37±1.11, and the sub-dimension score average of legal, ethical, and medical process related to organ donation and transplantation was 7.69±3.01. When the correct answer statuses were examined, it was found that the responses were at a high level

of 86.6% to 90.6% for the 1st, 3rd, and 15th items of the scale and at a low level of 26.0% to 45.7%

for the 2nd, 10th, and 17th items of the scale (**Table 2**).

Table 2. Disruptions of Organ-Tissue Donation and Transplantation Knowledge Scale items score

	True (1)	False (0)	I don't know (0)
Donor characteristics (Mean ± SD)			3.37±1.11
1. Organ donation is the process of giving an organ for the purpose of transplantation into another person. For a person to become a cadaver organ donor, brain death must be declared.	115 (90.5)	1 (0.8)	11 (8.7)
2. There is an age limit on who can donate organs. *	39 (30.7)	33 (26.0)	55 (43.3)
3. You can donate certain orga*ns while you are alive and healthy.	115 (90.6)	2 (1.5)	10 (7.9)
4. High blood pressure and diabetes are common causes for people to require a kidney transplant.	61 (48.0)	19 (15.0)	47 (37.0)
5. Brain death is the irreversible and total cessation of all the brain functions in the person, including the functions of the brainstem.	105 (82.7)	3 (2.3)	19 (15.0)
Legal, ethics, medical process related to organ donation and transplantation (Mean ± SD)			7.69±3.01
6. A person can recover from brain death. *	13 (10.2)	70 (55.2)	44 (34.6)
7. Brain death means that the patient is dead, not in a coma.	76 (59.8)	16 (12.6)	35 (27.6)
8. Organ tissue is removed after every death. *	14 (11.0)	82 (64.6)	31 (24.4)
9. Organ tissue removed from one person could be transplanted to everyone. *	17 (13.4)	86 (67.7)	24 (18.9)
10. A matched donor is based on blood group for all transplantation types. *	20 (15.7)	48 (37.8)	59 (46.5)
11. Kidneys, liver, heart, lungs, bone marrow, ileum, and cornea are all transplantable organs or tissues in our country.	89 (70.0)	3 (2.4)	35 (27.6)
12. If I die at a hospital, my family will be asked to grant consent for donation even if I have signed a donor card.	72 (56.7)	28 (22.0)	27 (21.3)
13. The final decision belongs to the doctor if a cadaver has not signed an organ donor card. *	11 (8.7)	97 (76.4)	19 (15.0)
14. Donors can live healthy years after a transplant operation.	98 (77.2)	5 (3.9)	24 (18.9)
15. Organ tissue transplantation is performed only between relatives *	1 (0.8)	110 (86.6)	16 (12.6)
16. People can cause their own disease requiring an organ transplant by using intravenous IV drugs or drinking too much alcohol.	91 (71.7)	9 (7.0)	27 (21.3)
17. There is only one type of organ donation: cadaver (only someone who had brain death declared can donate organ tissue) (cadavers). *	44 (34.6)	58 (45.7)	25 (19.7)
Total (Mean ± SD)			11.07±3.78

### **DISCUSSION**

The most important factors affecting the decision to organ donation are socioeconomic, educational, cultural, and religious factors <sup>(13)</sup>. In this study, the knowledge, and attitudes of Muslim religious officials on organ donation and transplantation, which plays an essential role in raising public awareness about organ donation,

were presented. Similar results were obtained in many prior studies with religious officials. In these studies, while the organ donation rate was low, the desire to be transplanted in case of need was high (5,7,9,13). Although most Muslim religious officials believed that organ donation was acceptable in terms of Islam, only half of them donated organs after death, and only a third consented to organ

donation for their relatives after death <sup>(8)</sup>. The low rate of religious officials recommending organ donation and considering becoming donors may be due to their lack of personal knowledge. This fact may need to be revised in guiding people about organ donation. Considering the participants who have not donated their organs today and who are considering donating in the future or the case of need, it is thought that the number of people waiting for organ transplantation will increase gradually and that living transplantations will be proportionately higher in our country instead of cadaveric transplantations.

In this study, the knowledge of religious officials about organ donation and transplantation was found to be at a medium level. When compared with other studies using the same scale, it was identified that the current knowledge level of theology students, who are candidates for religious officials, about organ donation and transplantation was sufficient (14). In another study, it was seen that the knowledge level mean score of theology students was similar to the one in this study (15). In a study conducted with religious officials in Turkey, more than half of the participants stated that they knew about organ donation, did not know what to do if they wished to donate their organs, and wanted to get information about organ donation (16). It was reported that almost all of the religious officials in the Eastern Black Sea Region in our country did not donate organs, and the main reasons for this were the lack of knowledge and interest in the relevant procedures (17). It was stated that half of our country's religious officials working in Kahramanmaraş knew about organ donation (5). Another study found that almost all religious officials' knowledge of organ donation and transplantation was either partially sufficient or insufficient (18). In another study with religious officials, the majority stated that they wanted to give more information to the public about organ transplantation and organ donation (19). It can be said that the level of knowledge of religious officials, who are opinion leaders in society, about organ donation and transplantation is not at the desired level. This fact suggests that access to information is limited in religious settings. Almost half of the participants in mosques and sermons said that they did not have access to information on organ donation (20), and they did not hear any fatwa <sup>(21)</sup>. These findings support the limitation of access.

It was determined that the participants gave "false" or "I do not know" answers at a high rate to the statements that there is an age limit to become an organ donor and that blood group compatibility between the donor and the receiver is sufficient in all transplantation procedures. In a study conducted with a group of non-health workers, the participants answered that they did not know about the items similar to this study (age limit in organ donation, chronic diseases can cause kidney transplantation, and there is no need for blood group compatibility between the donor and the receiver in all transplantation procedures) (22). One of the biggest obstacles to organ donation in Muslim countries is the incomplete understanding of brain death (23). It was seen that they answered "false" to the statement that organ transplantation can only be done by people who have died medically (cadavers). Insufficient understanding of this subject supports the false answers of the participants. In addition, the participants gave a high rate of "I do not know" answers to the statement, "Chronic diseases such as high blood pressure and diabetes are among the diseases that can cause kidney transplantation."

A positive attitude towards organ donation can be achieved by increasing knowledge on this subject (15). In this study, the fact that the level of knowledge of Muslim religious officials considering donating their organs was higher than the participants in the group who did not consider or were uncertainly supported this claim. The mean scores of the organ-tissue donation and transplantation knowledge scale were significantly higher in groups with a high education level, good economic status, a family member with a history of organ transplantation, and willingness to donate (12). Education level was also a factor in increasing the level of knowledge in another study (13). In another study, women's mean score on the organtissue donation and transplantation knowledge scale was significantly higher (22).

### **Study Limitations**

Since this study was conducted in an online environment, it limits the research regarding the information accuracy of the participants. Since the study results reflected only one province, it cannot be generalized across Turkey.

#### **CONCLUSION**

The study's results revealed the knowledge level of Muslim religious officials working in the province where the study was conducted. Accordingly, it may contribute to determining the initiatives and priorities required to increase knowledge about organ transplantation and donation. This study showed that the knowledge of the participants was at a medium level. The level of knowledge increased as the education level increased, and it determined that the level of knowledge of those who were considering donating their organs was higher. It is recommended that Muslim religious officials should be informed to increase their knowledge of organ donation, and the issue should be emphasized in the sermons they address to the public.

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